

AUG 11 1988

Critical Item: Compressor Starter Assembly

Find Number: K2

Criticality Category: 1S

SAA No: 09GS05-003

System/Area: ECS/SLF/SLS

NASA
Part No: N/A

PMN/ S70-0534/
Name: Portable Purge Unit

Mfg/
Part No: General Electric Company
CR232G, Closed Transition

Drawing/
Sheet No: 79K06061/1

Function: Provides means to start and maintain operation of compressor motor.

Critical Failure Mode: No output. FM No. 09GS05-003.014

Failure Cause: Open/shorted coil in relays/contact fails open.

Failure Effect: Shutdown of compressor. Blower/compressor interlock stops blower air flow, which results in loss of purge to Orbiter compartments. Loss of ability to monitor purge air for leaks. Possible loss of life or vehicle during a hazardous condition such as leakage of hazardous fluids or gases.

Acceptance Rationale

Design:

- o The compressor starter assembly is designed within criteria specified by 79K05733 (Performance, Design, Fabrication, and Testing of the Portable Purge Unit sec.3.3.8). Rated at 350hp, 600 V; operated at 300 hp, 480 V.
- o WYE-DELTA Reduced Voltage Starter.

Test:

- o The OIRSD, File VI will require that operation of the portable purge unit is verified prior to each use.
- o The compressor starter assembly is functionally tested quarterly for proper operation per OMI No. V6072 (Preventive Maintenance, Portable Purge Unit).

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Compressor Starter Assembly K2 (Continued)

Inspection:

- o The OMRSD, File VI will require that the electrical elements are inspected annually for:
 - corrosion
 - signs of arcing or shorts

Failure History:

- o No PRACA failure history identified.
- o No GIDEP failure history identified.

Operational Use:

- o There is nothing that can be done immediately to mitigate the effect of the failure.
- o The purge unit is monitored for any indication of malfunction. If any anomalies are observed, appropriate steps are taken to repair or replace the item.

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